

# **A Recap and Summary of the e-Biosphere 09 Conference**

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### **General Impressions**

- Tremendous excitement and interest in BI and in its future promise.
- Global in scope (e.g., posters).
- Time has come, but still in its infancy.
- Potential to serve science and society largely untapped.
- Critical juncture => plan next steps.
- Current activities labor intensive.
- Doesn't fully utilize tools and techniques in computer and information science, operations management, semantic web, etc.
- Abundant opportunity for automation, with consequent savings of time and money.
- Topically insular and conservative, embracing a too-narrow definition of biodiversity and BI.
- Biodiversity informatics should be much more than just digitizing what museum scientists do.
- Opportunities to establish greater relevance and utility are not being seized sufficiently, e.g., environmental genomics, molecular-based taxonomy, but should be.

### **Crafting a Roadmap: Desirable Features**

1. Maximum interoperability.
2. Community-wide standards for data formatting, sharing, aggregation.
3. Solid taxonomic foundation.
4. Comprehensive—global in scope.
5. Must reward participation and data sharing (while mindful of professional realities).
6. Utilize computer science and cutting-edge technology (actually, should develop cutting-edge technology).
7. Capacity building.
8. Minimize needless redundancy and duplication of effort.
9. Must target compelling scientific and societal problems, including both basic and applied research. Quality of the research must be on par with other scientific fields, if it is to achieve respect and long-term support. What are the goals?
10. Requires viable financial model(s) to insure sustainability.

### **Tensions**

- Need to adopt standards, but in such a way that promotes innovation from the bottom up.
- Promote community-wide activity, participation and benefit, while expecting competition among similar projects.
- Data quality: research-grade vs. user-driven (e.g., observational). Quality assurance—automated tools vs. peer review?
- Data sharing: How much is possible? How much is desirable?
- Proper balance between local vs. central control?
- Who makes important decisions?